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ABSTRACT

A frontier-free European Community (EC) has been created in which goods, capital, services, and people move freely across national frontiers. The issue of mobility is especially important for young people eager to exploit the opportunities opened up and for teachers and trainers in the educational field. A European dimension is now a necessary part of the educational experience of all young people growing up in the EC. In addition, skill levels in each region must be raised so that each region can better sustain its own economic development, attract new industries, and arrest the flow of qualified workers out of the region. Educational planning needs to take account of the current idea that the role of the school is to provide children with the basic competencies and attitudes on which broad-based qualifications can be built and the foundation laid for later training and retraining for employment. Vocational education must be restored to a place in the scheme of things as one of the broad options youth are encouraged to consider. The centerpiece of European strategy for the remaining 1990s must be to widen access to and participation in continuing education and training throughout working life. Although the traditional functions of higher education are more needed now than in the past, an organized and much more deliberate commitment to continuing education and training and lifelong learning must become a centrally recognized task of higher education. (YLB)

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CHARLES GITTINS MEMORIAL LECTURE

"EDUCATION IN A CHANGING EUROPE"

by

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Commission of the European Communities

AT THE UNIVERSITY COLLEGE OF WALES

SWANSEA

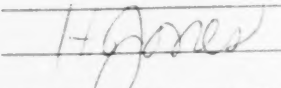
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I am honoured to have been invited to give the Charles Gittins Memorial Lecture this year and pleased that you have deliberately chosen to give a European dimension to this series of lectures, early in this historic year for Europe, 1992.

EUROPE IS ON THE MOVE

When I accepted the Principal's invitation, I agreed to focus my presentation on the impact of 1992 on our education and training systems. The creation of the biggest single market in the world by the end of 1992, involving 340 million people, straddling 12 Member States, in itself represented a remarkable breakthrough on the European and world stage. 1992 and the Community's development have already become first and centre page material for the media, featuring more and more prominently in our economic, commercial, business and cultural life. The business community has embraced 1992 firmly. Trade unions throughout Europe see it as their new hope. Regional and local authorities, universities and higher education institutions are actively exploring the opportunities available to them. Seeing it as a new source of inspiration as well as of financial resources, regions like Wales throughout Europe see their new chance to project their future development even more successfully in a European context.

Since the ratification of the Single European Act in 1987, extending the legal bases set out in the original Treaty of Rome, the turn-around, both political, psychological and even economic, in the Community's affairs has been dramatic.

To take but one example, over the last 4 years, the EC has provided massive financial support for the least developed regions primarily lying in Southern Europe, especially Spain, Portugal and Greece, but also Ireland, North and South, to help them raise their levels of economic development to match that of their stronger partners in the North. The European Community's Structural Funds, allocated for this purpose, represented more in comparative terms than the Marshall Plan did in the reconstruction of Europe after World War 2. All this because if the 12 countries fail to pull together as one strong unit, we will fail to capitalise on the opportunities we have as the largest

commercial and trading power in the world.

Then suddenly since the summer of 1989 we have been overwhelmed by the bewildering pace of change in Central and Eastern Europe and, most recently, by the breakup of the Soviet Union. The world seems to have been turned on its head. Faraway places have come into sharp focus: Dubrovnik, Sarajevo, Nagorno-Karabakh and many others are now familiar to us. Our notion of neighbourhood and of "community" have been abruptly enlarged and enhanced. I still have images in my mind of a Russian leader arguing the toss on the pavement in Lithuania, of a border guard cutting the barbed wire between Hungary and Austria and of young people clutching pieces of the Berlin wall. The map of Europe has changed before our very eyes. We are left breathless and uncertain about the future directions of change, as repeatedly we witness a bonfire of the certainties.

The countries of Central and Eastern Europe see their main chance for self-renewal and progress through their link with the democratic model represented by the European Community. Politically, economically and culturally they are reclaiming the right to belong to 'our' Europe - 'their' Europe as they want it. We must pay heed to the words of Jacques Delors who put it this way last week, "Europe pacified by the West will not remain pacified if it does not address the issue of the explosive Eastern Europe". For all our domestic uncertainties, the Community, is an attractive magnet. We sometimes fail to recognise that the countries of Western Europe have now experienced the longest period of peace between them for centuries, cemented in after World War 2 by the commitment of the Member States within the framework of the European Community to share power and resources so as to guarantee a shared future of peace, stability and growth.

This was the logic of the founding fathers Schuman and Monnet, in building the Community which will reach its next crucial stage in January 1993 by creating a frontier free Community, in which we are free to move goods, capital, services and people without impediment across our national frontiers.

Shortly, we shall witness the broadening of the European Community to encompass the countries of EFTA through the signature of the agreement on the European Economic Area. By 1995 indeed many now expect some of the EFTA countries, Sweden, Austria, Finland at least and probably Norway and Switzerland to become full members of the Community.

The deepening of our European family connexion has received further impetus by the signature last December by the Heads of the 12 Governments of the Maastricht text paving the way forward to European Political Union as well as Economic and Monetary Union. With greater responsibility in the world at large and a greater sense of its international commitments comes the need for greater solidarity at home. That is one of the strongest messages to emerge from Maastricht, and it is reflected in the establishment of a Cohesion Fund for four Member States - and measures to strengthen the structural policies to assist regions lagging behind or undergoing radical change.

All these changes have a profound influence on the lives of everyone in the Community, perhaps most especially on young people. Indeed, there are many signs that young people have already been demonstrating their wish to make their careers and plan their education and training in such a European context. The question of the quality and standards of our education and training systems in Europe have come to the centre of the Community agenda. Europe will simply not be competitive or cohesive if we fail to put the highest premium on our skills and talents. How can we get our act together in such a comprehensive European joint venture, if we do not understand what we mean by Europe or what Europe means to us, if we do not come much closer to each other in our mutual understanding, and in our capacity to work together? The Maastricht text, with the introduction of a new chapter on educational cooperation and vocational training policy, will provide the basis for the 12 Member States to play their full part in partnership to achieve this objective in the years ahead. The Maastricht text provides too for the setting up as of 1 January 1993 for the first time of the Committee of Regions, which has to be consulted on education, and in which Wales must play an active part.

A FRONTIER FREE EUROPE

The most obvious issue perhaps is that of mobility. 1992 is founded on the idea of "the four freedoms" - freedom of movement for goods, services, capital and people, with an implicit fifth namely the free movement of ideas. None of this is particularly new of course. Article 57 of the founding Treaty of Rome provided a clear basis for legislation in all these areas over thirty years ago. Professionals and workers of all kinds who want to move within the Community must have confidence that they can do so without difficulties arising from the particular qualifications they may have acquired in individual Member States. This will be especially important for young people eager to exploit the opportunities opened up by the completion of the internal market, and of course in the educational field for teachers and trainers. The rapidly increasing numbers of business mergers and joint ventures of all kinds across the Community will bring in their train new patterns of voluntary mobility, especially for the highly skilled and qualified. Many firms are already giving a new European profile to their recruitment policies and this in turn is influencing the content of curricula at all levels as the education systems seek to provide for these new needs.

Under the impetus of the 1992 deadline, the key breakthrough was achieved in December 1988 with the adoption by the Council of Ministers of new binding legislation, establishing a general system of mutual recognition of professional qualifications obtained after three or more years of higher education studies. Based on the principle of mutual trust in the quality of the outputs of each national system, the new legislation affects well over one hundred different professions and complements the legal provisions which already existed in respect, for example, of medical and paramedical professions and architects. This proved to be an extremely significant milestone, catching the imagination everywhere of students, educationists and professionals, and fuelling efforts to make similar progress in the recognition and comparability of lower level vocational and technical qualifications - an even more complex and diversified area but one affecting millions of present and future workers. For this reason, a second complementary proposal will, I believe, soon be adopted by the Council, designed in

effect to establish mutual recognition of qualifications governing access to all regulated professions not covered by the first.

Qualifications are however but the tip of the iceberg. Beneath the surface there is a myriad of other factors and barriers to movement which the educational systems are gradually being called upon to do something about. I refer primarily to the need to remove the stereotyped conceptions and prejudices most of us have about other countries and other peoples. Jack Smith, General Motors' international boss, summed up the problems on a global scale in an apocryphal tale he told at a recent Stockholm motor show.

"Students at an international school were studying the automobile business. The Americans wrote a paper on the world's biggest and best cars. The English concentrated on the motor and the glory of the British Empire. The French topic was love and the automobile, and the Italians never quite agreed on what their subject should be. The German devoted 12 volumes to the theory of the automobile, and the Swedes did a thesis on how to make cars for joy and fulfilment. Finally, the Japanese students came up with a strategic plan for 100 per cent market share".

The long-term, continuing responsibility for this process of changing attitudes and learning that differences and diversity are an asset and not a threat must lie primarily with the different educational systems in the Community, working together in partnership in practical ways at all levels, building on the strengths of their diversity. We, in Wales, should use our rich bilingual and bicultural traditions as a major positive asset in this wider multilingual and multicultural framework, instead as so often sadly of being somewhat defensive about what is our very special treasure-store and distinctive character.

We must come to terms with the fact that a European dimension is now a necessary part of the educational experience of all young people growing up in the Community. Once the Maastricht Treaty is ratified later this year, we shall all have the right, for the first time, to European citizenship as well as to our existing affiliation. We must be prepared to take on these new responsibilities. Schools, teachers and pupils at all levels will need to find new and better ways of

preparing for a European future. The new Maastricht text (Article 126) will provide the basis for the Community to complement the efforts taken within Member States to develop much stronger, large-scale cooperation at Community level in the education field - cooperation we need to develop imaginatively as education provides the binding force for cooperation and partnership in all other sectors if we really wish to make a success of the post-1993 possibilities and master together the challenges which lie ahead. The hearts and minds of young people will determine the shape of our shared future in Europe - they must be given the opportunities to explore and build their own Europe for the future.

The major educational initiatives of the European Community launched since 1987 may be looked upon as providing basic European infrastructures to assist the Member States to make more rapid progress in this direction.

Since 1987 and the signature of the Single European Act we have seen the launching of several Community initiatives, most notably the trio of programmes - ERASMUS, COMETT and LINGUA - which have put inter-university and higher education cooperation in Europe on a much larger scale than any previous international venture. The more than £ 100 million (+ £ 91 million TEMPUS) agreed by the Council during 1992 complements the substantial training resources tied up in the European Structural Funds, the European Social Fund in particular. The Community R&D programme, now in its third phase, also places a high premium on the mobility and training of researchers with more than £ 350 million earmarked for this purpose in the period up to 1993.

This pattern of educational cooperation was given further impetus by the pace of political developments in Eastern Europe, which resulted in the decision of the Council of Ministers to launch with effect from the academic year 1990/1, the TEMPUS scheme, modelled mainly on ERASMUS, but tailored to respond to the needs of at first five of the countries of Central and Eastern Europe (Hungary, Poland, Czechoslovakia, Bulgaria and Roumania), in adapting their higher education systems through cooperation with Western European institutions and other countries of the so-called G24. Already this year, the TEMPUS scheme has been extended to involve 10 countries from Central Europe,

including now the BALTICS as well, and with new TEMPUS offices operating effectively in Serbia and Croatia.

The idea is to ensure that future professionals in all fields and walks of life will be able to act as multipliers of further European cooperation and contribute to a long-term process of building stronger foundation of inter-cultural understanding. In this way too, we hope to encourage a new form of professionalism gained through experience of working and studying in another country and of course by the acquisition of at least one foreign language - the kind of professionalism which will know best how to exploit the opportunities of the Single Market.

Under the Community programmes, the mobility of students is supported only where there is a guarantee of the mutual recognition of the period of study spent abroad by both the sending and receiving universities. A guarantee which can demonstrate to future employers the added value of the European experience gained abroad by the young graduate. There is now widespread evidence of universities setting up or strengthening their European offices (ERASMUS/European offices) and committing themselves institutionally more strongly than ever before to a process of internationalisation of their teaching programmes; evidence too of the emergence of new structures of advice and support in those Member States, notably in Southern Europe, which previously were barely involved at all in intra-EC cooperation in this field and which now facilitate the active involvement of Greece, Spain and Portugal - the latter important bridge-heads in time to new connexions with Latin America.

This year, we expect to contribute to moving in all up to 100,000 students and involve in such a process of cooperation around 1500 of the major higher education institutions in the European Community. What a change from the picture previously when only 5 years ago student mobility in Europe could not be expressed in a single percentage point, let alone from Medieval times when scholars like Erasmus could move from university to university without difficulty.

In looking towards the year 2000, building from this platform, I believe we shall see a substantial amount of credit transfer between universities across Europe, backed up by open and distance learning delivery methods, with higher education teachers working in teams to assess and examine joint European degrees and diplomas. I believe that a combined effort of the University of Wales in partnership with the Open University could play a leading role in such a development.

The success of ERASMUS, COMETT and these other schemes lies in my view in the fact that they were designed to unleash initiatives from the grass-roots on an entirely voluntary and deliberately decentralised basis. They involve the forging of joint agreements at an institutional 'grass-roots' level and place the power of initiative firmly in the hands of universities to seek and develop partners abroad. They increasingly have a strong inter-regional dimension too as universities tighten their links with the trans-European initiatives initiated by local and regional authorities, as has been the case for example between Swansea and Mannheim, and, as I hope will be the case with the Welsh links to the 4-Motor Regions of Baden-Wurtemberg, Lombardy, Catalonia and the Rhone-Alpes. These programmes have acted as a catalyst too in accelerating the trend away from the study of a single language towards combined languages, or multi-disciplinary degrees which include a significant element of language work. Business studies and languages is undoubtedly the best known, but other disciplines are following suit, often as a result of clear indications of student demand. In the UK, French and, to a lesser extent, German continue to dominate, but there are now signs of growing interest in other less commonly taught languages, although the numbers remain very small. Once again, in Swansea, I am pleased to note the range and breadth of your initiatives in this field.

HUMAN RESOURCES: TOP OF THE AGENDA

Not everyone will be mobile after 1992. We need urgently to raise the skills levels in each region so that they can better sustain their own economic development, attract new industries, and arrest the flow of qualified manpower from the very regions which desperately need to

retain their own talented, highly qualified people.

Education and training are the key to the life-cycle chances of every citizen. They will to some extent determine the competitiveness of the Community as a whole in relation to its geo-political competitors, including the United States and Japan.

Europe's two great post World War II achievements, full employment and the Welfare State, are in jeopardy : the first because Europe has a more severe skills mismatch problem than either Japan or the United States; the second because social protection has been overwhelmingly built on income transfers, the political limits of which are painfully obvious. We may hope that the completed Internal Market will bring higher growth and thereby make life easier, but even in that eventuality these problems will not run away, for at least three reasons :

- the European education and training systems are not providing the minimum competencies and qualifications for the vast majority of young people to get into the labour-force - this is the direct route to social exclusion. Let us not forget that in the EC as a whole we have 12-1/2 million unemployed, of which more than 4-1/2 million young people under the age of 25.
- the training systems are not fast enough in their response to new skills needs resulting from technological change and sharpening economic competition - hence a fundamental mismatch problem which is typically Europe;
- social policies have remained in a passive "income maintenance" posture despite the fact that loss of skill in adult life is now the main threat to social security, leading directly into long-term unemployment and dependence on state income.

The nations of Europe, with all their political and cultural diversity have long recognised that their future is dependent on the skills, ingenuity, inventiveness and creativity of people. Industrialisation and the growth of education went hand-in-hand. Yet we all now share

grave doubts about our comparative, competitive edge. Are we in Europe doing as well as the Americans in extending the frontiers of scientific and technical knowledge and in translating new knowledge into economically competitive products and processes? Are we matching the capacity of the Japanese to adjust skills to new concepts of production organisation? Are we developing and using our potential human capital to the extent that we could and should ?

No grouping of nations can nowadays claim to have achieved a high quality of growth if significant elements of its human potential remain untapped or underutilised. It may be acceptable to leave natural resources in the ground until the day they become "economic", to scrap capital or progressively write it off... but it would be disastrous to apply these economic concepts to our children, or indeed to ourselves! The pursuit of economic growth must first and foremost recognise the need for an ambitious view of our human potential. Such a recognition not only serves the purpose of economic growth but it is also compatible with the continuing importance in democracies of the ideal of developing the capabilities of each and every individual.

In this relationship economic theory, industrial practice and even political events are all coming to our aid. There is a growing consensus throughout the European Community, as in other parts of the world, that so-called "intangible capital" is the most vital resource of advanced economies, without which the natural endowments of nations, their financial power and fixed capital will become dwindling resources. This is not only a question of acquiring new skills and knowledge, but also of the capacity to organise and innovate, today expressed in the complex networks of information and alliances, through which nations and firms compete.

The potential rewards of the radical new information and communications technologies cannot be reaped without a whole range of new skills and organisational innovations and without a socio-economic process which facilitates their widespread diffusion. This seems to explain the "productivity paradox", namely that massive investment in new technologies is not yet leading to the productivity gains that were to be expected. Without investment in the "intangible capital" and the infrastructures needed to develop it - of which education, training

and research in a broad sense are a central part - the economic returns are slow to come. And without European progress on this front some of the economic opportunities of the Single European Market will be irretrievably lost. That is why some of the major Community programmes, such as COMETT (forging university-industry partnerships transnationally) and EUROTECNET (exploring the impact of technological change on training and qualification structures), complementing the Community R and D effort, are of such great significance.

There can be no lasting political influence for the Community without a competitive economy. The new Treaty emphasizes this need for competitiveness, making it a priority for the Community between 1993 and 1997. For the first time, the new Article 130 makes industrial competitiveness a central issue. The provisions on research and development spell out the link between this and other policies. Title XII allows the Community to create infrastructure networks that will ensure that the single market operates effectively.

The Commission has just issued its proposals for the period 1993 to 1997, which focus on 2 main policy instruments : R and D and training. The importance of vocational training and retraining in a period of rapid industrial change and restructuring is reflected in the role to be assigned to the European Social Fund by Article 123. Clear rules are to be laid down for intervention by the European Social Fund in the tasks of anticipating the effects of change on employment, adapting to new production and retraining for new skills. These operations will be covered by programmes to be drawn up in cooperation with the Member States, the firms concerned and vocational training agencies. Training will be given on the job, or in education and training establishments offering general education and skills training.

If this massive training effort fails to yield the necessary results during the 1990s, there will indeed be a de-facto danger of a 2 speed Europe. It is in our common interest therefore that the highest priority be accorded to raising the quality and standards of training throughout the Community, and this must be the logic behind the Commission's full commitment to implement the new Article 127 of Maastricht which charges the Community with the responsibility "to implement a vocational training policy".

VOCATIONAL EDUCATION AND TRAINING FOR ALL YOUNG PEOPLE

Over the past 15 years, by far the dominant question of common concern in Europe has been the vocational training of young people, - initial or youth training as we tend to call it in Brussels, or "16-19" as it is often called in the U.K.

The first reaction to the high unemployment of the 1970s and 80s in Europe was to strengthen the vocational elements in secondary education. Youngsters and their families voted with their feet, often encouraged by politicians and industrialists to equip themselves with a viable labour market qualification. Today, the wind is changing back towards the idea that the role of the school is to provide children with the basic competences and attitudes on which broad-based qualifications can be built and the foundation laid for later training and retraining for employment, to some extent, by and in firms.

For Europe, as for Japan and other countries with limited physical resources, the competition to succeed in the development of human capital is the key to economic success. Because of its colonial and commercial past, Europe has been a supplier of human capital to the world. It is in danger of losing its comparative advantage, if it does not modernise its education and training institutions effectively. This is particularly true given the demographic picture. In the United Kingdom, for instance, those aged between 50 and 74 will increase by 29% by the year 2230, while young people up to the age of 25 will decline up to the end of the century by 26%, and do not increase until after 2020. Planning - if planning still survives as an activity in the so-called market economy world - will need to take account of that marked change, and ensure that the way systems of education and training evolve satisfies the need for recurrent opportunities, for flexibility, varied access, and mobility.

The main landmark in this area is the drive, which the Commission has helped to mobilise, towards achieving in Europe a society in which there are genuine vocational training opportunities for all young people, opportunities which lead to a recognised and worthwhile vocational qualification, and which avoid the deadends of so many of

the ad hoc training initiatives invented in the 1970s and 1980s often designed to improve the unemployment statistics.

Three points in particular stand out:

- . the ad hoc training measures set up in the 1970s and 1980s must now be incorporated into an organised post-compulsory education and training system, in which initial training, between the ages of 16 and say 21, is seen as a key, pivotal stage between compulsory schooling and continuing training at adult level;
- . secondly, the more emphasis we put on the entitlement of young people to vocational training, and on their right to training of a certain quality, the more emphasis we also inevitably place on qualifications, because they are the means of controlling and certifying the quality and duration of the training. The consequence is that we would appear to be moving inexorably towards a qualifications-based society, where it will be increasingly difficult to get a decent job without having obtained at least some form of respectable qualification. We may like this, or not. But it seems to be a strong trend, which is the logical consequence of wanting to improve the quality of the workforce;
- . throughout Europe the opportunity must be grasped to encourage more girls and young women to enter high value-added occupations, which need longer and higher levels of training. Here, if anywhere, there is need for clear leadership, and concerted action, because no part of the system can achieve success on its own schools, careers services, and employers are equally unable to achieve the desired goal independently. Most important of all, there must be locally-coordinated action. The countries which succeed in this area are going to have an important advantage when it comes to coping with the skills shortages which this dramatic change in the labour market will surely lead to during the 1990s.

Closely connected to these three aspects is the question of the status of vocational training. In some countries, though notably not the Federal Republic of Germany and only to a lesser extent France or Italy, "technical education" suffers from a down-market image - because

technical schools are where you go to if you are not bright enough to go to a Gymnasium or a Lyceo Classico or Scientifico. They are for other people's children!

If we want a well-qualified workforce, we have finally got to tackle this issue. The United Kingdom is not alone in having an anti-technical, anti-vocational culture, though perhaps it has one of the longest records of attempts to do something about it, with so little success. It seems difficult to imagine young people in England and Wales becoming properly equipped, and in large enough numbers, to compete effectively with their peers on the continent, if the present restrictive A-level system is allowed to continue - with its effective discouragement, for instance, of continued language learning through to age 18. It would be encouraging too, to see "technical education and training" restored to a place in the scheme of things, as one of the broad options which young people should be encouraged to consider, in preparing for entry into an increasingly technical society and economy; the United Kingdom looks increasingly isolated in that respect too.

The French are certainly taking the point seriously. The development of a whole range of vocational qualifications at Baccalaureat level which will, with some safeguards, provide right of access to higher education, is a major advance. The problem, as ever, is to break the link between quality and exclusiveness. Finding ways to define, and then project into the public consciousness, different kinds of quality, appropriate to a scientific and technological society, is still one of the major challenges to be faced in the 1990s, one in which the attraction and standing of the "new" technology may be a key factor.

To get it right, structures may be as important as good marketing. My priorities, for a new successful system, would include:

- . clear possibilities for the individual to progress, from vocational and technical studies, into higher education;
- . continuity between initial and adult training, through credit transfer and accumulation, on the lines that the Scots have developed (why not a Celtic partnership in this field ?);

- greater parity of treatment between students in technical training courses and those in education or academic ones. As David Milliband put it recently in his report on a British Baccalaureat, "education and training are not polar opposites, but different types of learning that merge into each other. The essence of an educational foundation for life is that it combines intellectual and practical study". Technical subjects need more and more general-subject foundations, and academically trained personnel are more and more expected to have general life-skills traditionally associated with the world of technical and practical activity.

We should not deceive ourselves into thinking that, for some half of the Member States, we are yet in sight of achieving such a system. For many Member States it will certainly not be achieved this side of the year 2000. One may hope that the United Kingdom is not among them. The recently announced CBI's World Class Targets envisage 80% of the UK's labour market entrants achieving a minimum of NVQ level 2 - that is to say skilled worker - by 1997. The gap between the present situation and that target, which itself falls short of equality of opportunity is enormous. For 1989 it was estimated that 45% of 18 year olds reached NVQ level 2. Nearly doubling this percentage by 1997 will indeed require some big changes.

Over the past decade the realisation has spread that schools, colleges and universities cannot on their own deliver the kind of experience of education and training which society, and individuals, these days expect. Before the oil crisis of the mid-1970s, there were some who believed that this was so, but they were a minority. They had usually argued for it from a strictly social policy point of view - because schools could not make good the deficits of other social policies, such as inadequacies of housing, or jobs, or poor health.

But now attention is much more focused on the school's collaboration with its economic partners - with the so-called world of industry - and the argument, you might say, is over. The principle of education-industry partnership, in some form, is almost universally accepted. This must be one of the main determinants of how education and training systems are going to evolve in the coming years.

The extent to which there is now a convergence between the views of educators and the views of the employers and trade unions - at least those of their representatives who meet with us round the table in Brussels - about the purposes, for instance, of compulsory schooling, would surely seem remarkable to our predecessors in education of a generation ago, when cynical educationists, in my experience, were accustomed to say that there were only two qualities which employers expected the school-system to develop in their pupils, and they were punctuality and obedience. When the employers group in Brussels recently produced for the Commission a list of the skills which young people should acquire in compulsory schooling, and should develop more fully in vocational training, the list they came up with including :

"Commitment to quality; ability to communicate effectively, knowledge of one or more foreign languages; the desire to use and develop technologies; a general grasp of the importance of the economic environment in which firms function; problem solving capacity; willingness to adapt to change; ability to work in a team and to relate to others; and an understanding of economics and of the labour market".

The fundamental significance of the change is the opening up of the processes and purposes of education both to discussion and to active participation and support from outside. It widens the choice of context in which learning can take place. In many parts of Europe, the school is still the only place where learning is seen to be appropriately carried out, and there are still many who believe that it is entirely the responsibility of the State to see to it that children learn and are prepared for entry to work and society. The closed classroom, the formal lesson, the acquisition of knowledge rather than skills, and a concentration on subjects rather than a balance between subject-based learning and general life skills and personal development, - these are still the norms and ideals of most schools in Europe.

Nonetheless, partnership, links, and the opening of the school to the outside world are making steady headway. Cooperation with parents, in a whole variety of ways as partners with the school, is much freely recognised in many parts of Europe, than it was a decade ago.

We know that school has no monopoly of the learning process; it starts at home, it takes place through play, leisure activities and experiences of all kinds, as well as in school, and it goes on, hopefully, throughout life. These days it could be argued that the most successful schools are those which have actively encouraged teachers to rethink the traditional frontier between what it is appropriate to learn in school and what should be learned outside the school, whether through work-shadowing, work experience, field studies, a training placement in another country, or off the video screen.

TOWARDS A POLICY OF CONTINUING EDUCATION AND TRAINING

Whereas youth training was the dominant theme of the 1970s and 1980s, the centrepiece of European strategy for the remaining 1990s must be to widen access to and participation in continuing education and training throughout working life. This is now not only a demographic necessity - with fewer young entrants entering the labour market in the next decade (the number of school-leavers in the UK dipping by more than a quarter) - it is widely recognised as a vital factor in the economic strategy of firms concerned to achieve for themselves a competitive edge : better performance and productivity as a pay-off from investment in training. As the European Round Table of Industrialists put it in a recent report : "Life long learning is now a prime requirement for a full and happy life. Nowhere is this more important than at work .. To remain effective each person has to learn and re-learn throughout his or her working life".

With companies in some countries now spending more together on training than their governments spend on their university and higher education sector, it is essential to map out a new European strategy for training for the 1990s forging a much stronger and explicit partnership between the public and private sectors.

The key feature for the development of our approach for the future must

be to ensure that this is no longer the case - that there are opportunities to progress, to further and higher levels, for all. There must be no dead ends, in the sense of courses which, even though they may provide a qualification, do not offer the possibility of going on to a further and higher level later. From vocational courses there must be bridges, for those who wish to go higher and have the patience and perseverance to do so, into technical education; and from technical education into the academic track. Equally, there must be opportunities to go to higher levels in each track, with due credit being given for prior learning, whether gained in school, college or the work place.

We need to break out of the rigid education-work-retirement sequence, and recognise that second and even third careers, with opportunities to re-orient oneself and to re-train, are becoming more frequent.

Leading European employers have recently begun to recognise the need to invest substantially in all phases of lifelong learning to ensure business success. Some have taken steps to enhance the quality of childhood learning, some are entering into partnerships with higher education to help prepare graduates for a lifetime of workplace learning, and some are encouraging staff to engage in non-vocational as well as vocational learning to stimulate the emergence of a "learning culture" in their organisations. The emphasis is on instilling enthusiasm for learning throughout life, and creating a workforce of skilled learners which is both capable of adapting to change and willing to do so.

But even though many large firms now set up company-wide training plans, some setting aside more than 10% of their payroll for education, the danger persists that the bulk of the present workforce, working in SMEs, will be isolated from such training provisions without public intervention and partnership. In the UK the latest substantial evidence on this subject was depressing: fewer than one in three companies in this country had a training plan or a training budget. Only one in five evaluated the benefits of training. Only one in 10 adopted training targets for their whole workforce. Only one in 40 companies is actually evaluating any kind of cost benefit of the training that it does. Only one third of the workforce when last surveyed by employers had had any training at all within the last three

years and a further one third had had no training at all in the whole of their working lives.

As Sir Christopher Ball put it recently : "Learning pays. Learning well pays well. Better learning benefits everyone - nations, companies and individuals. The benefits of good learning are economic, social and personal ... In other words, a better quality and standard of life for all."

The capacity to acquire new or complementary skills at any point over a lifetime and to be able to change and transfer jobs within and across national frontiers will henceforth be crucial to the curriculum vitae of each and everyone. That is what a frontier-free Community will be all about. The best we can do is to provide a flexible, wide-ranging set of education and training opportunities so that individuals can make rational decisions about their own lives at different points in time. We need to improve the information and counselling systems so that individuals can choose rationally; we need to make further rapid progress on the transferability of qualifications, credits and work experience. This is something the Americans do well, but with their kind of "supermarket" approach. Japanese enterprises take on much of the responsibility, but it appears that they may limit the freedom of the individual to move.

In Europe, I believe we can only succeed through a new deal of public/private co-operation, involving a wide-ranging set of actors, including firms and education, training and research institutions - but with some recognised rules of the game. It is in this context that I believe universities and higher education institutions have a special responsibility though it is not yet clear that generally they are meeting the challenge.

THE ROLE OF HIGHER EDUCATION INSTITUTIONS

In looking forward to the year 2000 we are all conscious of the risks and challenges for the higher education sector. Pressures from the more diverse clienteles of higher education for marketable "vocational" qualifications, the relative decline in most Member States in basic public financial support and the drive towards "useful" research have been putting the traditional higher learning and research functions in question.

I would argue that the traditional functions of higher education are more needed now than in the past. However, Universities should demonstrate that the need for growing specialisation is not incompatible with the provision of a sound basic higher education. There are many examples of progressive entrepreneurs increasingly emphasising the importance of sound, general foundations on which specialised qualifications can be built and rebuilt. Complaints abound about the lack of linguistic, communications and cultural capabilities on the part of engineers and scientists. The "two cultures" debate initiated by C.P. Snow is back.

On the scientific side, we need to nourish a diversified range of technologies to combat the mono-cultures which are the root cause of environmental damage, for example in the fields of energy, transportation and agriculture. Competitive industries are bound to lock into the dominant technology, with the result that when the limits are reached the alternatives are not available. Partnership agreements with industry of the kind that have been developed by Swansea (in the frame of COMETT) seem to me to be an attractive formula that can work to the mutual advantage of companies and universities, marrying the short, medium and long term preoccupations of both sides.

But higher education cannot simply be "on tap". It has to respond to future needs and to the long-term ambitions of individuals. The signs everywhere are of a shift from narrow specialisation to broadly based qualifications, from mono-disciplines to bridge-building, hybrid, dual qualifications, and from the fashionable denigration of the "soft"

sciences to serious attempts to reconnect the two cultures. In the business world these same changes are reflected in the retreat of "Taylorism" and the advance of "Sonyism". Indeed, Mr. Morita, the founder of Sony, went so far as to say recently that he had appointed an opera singer as a Vice-President of the company. No doubt incidentally one of the reasons why Japanese investors flock most of all to Wales !

An organised and much more deliberate commitment to continuing education and training and life long learning must become a centrally recognised tasks of the higher education system. I believe that in this way we will then more easily register education and training as a vital force for the regeneration of regions and local areas. Prized as a visible asset by the public at grass-roots level, and as an essential investment for achieving growth and mastering structural change in its region, the University is more likely to gain the confidence of the public and private sector and probably secure stronger financial support because of its explicit partnership with them.

The new European perspectives opened by the Maastricht agreement bring challenges of a new order. Coming to terms with them has to be part of the universities' planning process on a continuing basis. If the map of Europe is changing - in its geo-political, economic, trading and cultural dimensions - the map of learning is changing too. Our future understanding of the world in which we live must change. The move to European Political Union and the future European labour market opportunities opened by the 1992 will require graduates in all fields (not only law, economics and business studies), with the capacity to work across the cultures, through the medium of at least two and preferably three languages. If these different challenges are taken up with skill and determination, and with strong leadership, universities will be seen as privileged centres of European expertise at the service of their regions and as the carrier of partnership with other regions of Europe and the world.

CONCLUSION

The underlying theme of my lecture has been the importance of our commitment to partnership: partnership in making the most of our human capital, putting the highest premium on the quality of our education service in Europe. Partnership between Member States, partnership between the different regions; partnership with the Community Institutions, partnership with and between employers and trade unions, partnership between the public and private sectors and between the different parts of the education and training systems.

Only with an active and urgent commitment to European partnership in the field of education and training, building on the rich diversity of our experience, will the post 1993 challenges be grasped, and the Community be in a position to play a strong role on the world stage. Without such a partnership, providing the necessary basis for a good economic and social policy, the overall buildup of the Community will be impaired. The stakes are high: we must succeed. Our future in Wales and in Europe depends on it.